

### **Robert Bosch GmbH**

Power Tools Division 70745 Leinfelden-Echterdingen Germany

www.bosch-garden.com

**F 016 L70 777** (2010.10) O / 18 **XXX** 

## **ART**

23 LI | 26 LI



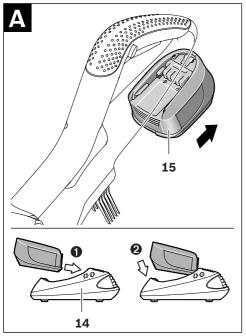
en Original instructions

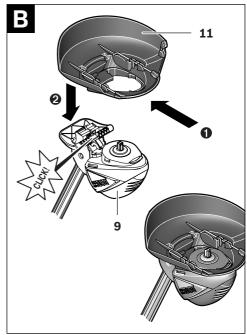


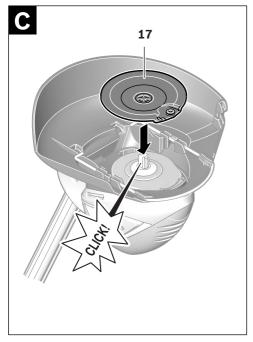
English......Page 7

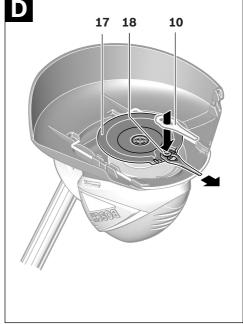


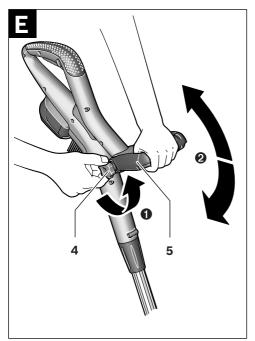
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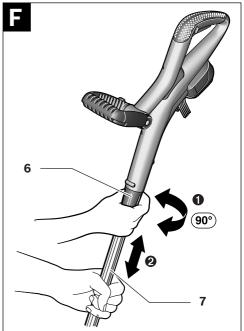


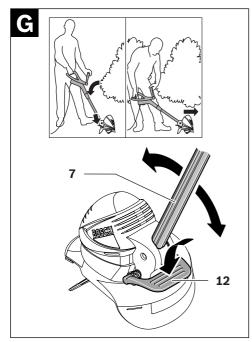


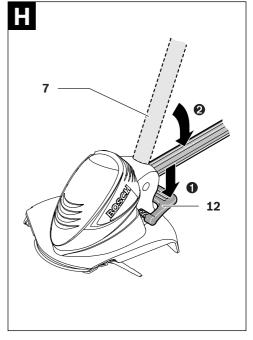




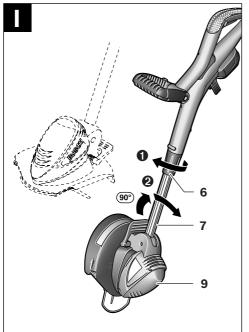




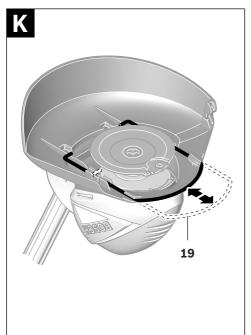


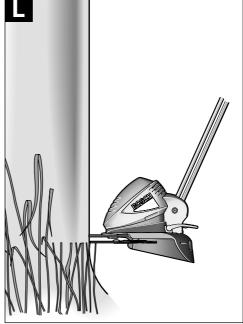


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## **Safety Notes**

Warning! Read these instructions carefully, be familiar with the controls and the proper use of the machine. Please keep the instructions safe for later use!

## Explanation of symbols on the cordless trimmer



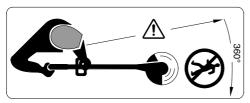
General hazard safety alert.



Read instruction manual.



Wear eye protection.



Pay attention that bystanders are not injured through foreign objects thrown from the machine.

Keep bystanders a safe distance away from the machine.



Remove battery before adjusting or cleaning, and before leaving the machine unattended for any period.



Do not work in the rain or leave the cordless trimmer outdoors whilst it is raining.



Do not use the charger if the cord is damaged.

## **Machine-specific Safety Warnings**

- ► This tool is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

  Children should be supervised to ensure that
- they do not play with the appliance.
- ▶ Never allow children or people unfamiliar with these instructions to use the cordless trimmer. Local regulations may restrict the age of the operator. When not in use store the trimmer out of reach of children.
- Do not operate the cordless trimmer when barefoot or wearing open sandals; always wear substantial footwear and long trousers.
- Never operate the machine while people, especially children or pets, are nearby.
- The operator or user is responsible for accidents or hazards occurring to other people or their property.
- Wait until the blade has completely stopped before touching it. The blade continues to rotate after the trimmer is switched off; a rotating blade can cause injury.
- Work only in daylight or in good artificial light.
- Avoid operating the cordless trimmer in wet grass, where feasible.
- Switch off when transporting the cordless trimmer to and from the area to be worked on.
- ► Switch on the cordless trimmer with hands and feet well away from the rotating blade.
- ► Do not put hands or feet near the rotating blade.
- Never use a metal blade in this trimmer.
- Never operate the cordless trimmer with damaged guards or shields or without guards or shields in position.
- Before using the machine and after impact, check for signs of wear or damage, and repair if necessary.

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- Inspect and maintain the cordless trimmer regularly.
- ► Have the cordless trimmer repaired only by an authorised customer service agent.
- Always ensure that the ventilation slots are kept clear of debris.
- Switch off and remove the battery:
  - whenever you leave the machine unattended for any period
  - before replacing the blade
  - before cleaning or working on the cordless trimmer.
- Ensure the switch is in the off position before inserting battery pack. Inserting the battery pack into machines that have the switch on invites accidents.
- Store the machine in a secure dry place out of the reach of children. Do not place other objects on top of the machine.
- ▶ Replace worn or damaged parts for safety.
- Ensure replacement parts fitted are Bosch approved.
- Use only Bosch battery packs intended specifically for the machine. Use of any other battery packs may create a risk of injury and fire.
- ▶ Do not open the battery. Danger of shortcircuiting.



Protect the battery against heat, e. g., against continuous intense sunlight, fire, water, and moisture. Danger of explosion.

- ➤ When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause skin irritation or burns.

- ▶ In case of damage and improper use of the battery, vapours may be emitted. Provide for fresh air and seek medical help in case of complaints. The vapours can irritate the respiratory system.
- ► Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- When the battery is defective, liquid can escape and come into contact with adjacent components. Check any parts concerned.
  Clean such parts or replace them, if required.
- Use the battery only in conjunction with your Bosch garden product. This measure alone protects the battery against dangerous overload.

## Safety Warnings for battery chargers



Keep the battery charger away from rain or moisture. Penetration of water in the battery charger increases the risk of an electric shock.

- Only charge Bosch lithium ion batteries or batteries installed in Bosch products with the voltages listed in the technical data. Otherwise there is danger of fire and explosion.
- ► Keep the battery charger clean. Contamination can lead to danger of an electric shock.
- ▶ Before each use, check the battery charger, cable and plug. If damage is detected, do not use the battery charger. Never open the battery charger yourself. Have repairs performed only by a qualified technician and only using original spare parts. Damaged battery chargers, cables and plugs increase the risk of an electric shock.
- Do not operate the battery charger on easily inflammable surfaces (e. g., paper, textiles, etc.) or surroundings. The heating of the battery charger during the charging process can pose a fire hazard.
- Children should be supervised to ensure that they do not play with the battery charger.

 Children or persons with mental or physical limitations may only use the charger under supervision or after having been instructed.

A thorough introduction reduces operating errors and injuries.

Products sold in **GB only**: Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362).

If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.

The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.

## **Functional Description**



Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

#### Intended Use

The machine is intended for the cutting of grass and weeds under bushes, as well as on slopes and edges that can not be reached with the lawn mower.

Intended use is related to operation within 0 °C and 40 °C ambient temperature.

#### **Delivery Scope**

Carefully remove the garden product from its packaging and check if the following parts are complete:

- Cordless trimmer
- Blade guard
- Adjustable handle (fitted)
- Cutting disc
- Blade
- Operating instructions

Battery and charger are included in certain executions.

When parts are missing or damaged, please contact your dealer.

#### **Product Features**

The numbering of the garden product features refers to the illustration of the garden product on the graphics page.

- 1 On/Off switch
- 2 Lock-off button for On/Off switch
- 3 Handle
- 4 Handle screw
- 5 Adjustable handle
- 6 Adjusting collar
- 7 Shaft
- 8 Ventilation slots
- 9 Trimmer head
- 10 Blade
- 11 Blade guard
- 12 Foot pedal for trimmer-head angle adjustment
- 13 LED indicator
- 14 Battery charger
- 15 Battery
- 16 Serial number
- 17 Cutting disc
- **18** Pin
- 19 Plant protector

Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.

## **Technical Data**

Cordless Trimmer		ART 23 LI	ART 26 LI		
Article number		3 600 H78 K	3 600 H78 L		
No-load speed	min <sup>-1</sup>	7500	7400		
Adjustable handle		•	•		
Trimmer-head angle adjustment/edging adjustment		•	•		
Cutting diameter	cm	23	26		
Weight according to EPTA-Procedure 01/2003	kg	2.3	2.4		
Serial number	S	See serial number <b>16</b> (type plate) on the machine			
Battery		Li-lon	Li-lon		
Article number					
– 1.3 Ah – 1.5 Ah		2 607 336 037 -	2 607 336 039 2 607 336 207		
Rated voltage	V=	14.4	18		
Capacity					
- 2 607 336 037/ 039 - 2 607 336 207	Ah Ah	1.3	1.3 1.5		
Number of battery cells					
- 2 607 336 037/ 039 - 2 607 336 207		4 -	5 5		
Charging period (battery discharged)	min	60 - 180	60 - 180		
Battery Charger		AL 2215 CV	AL 2215 CV		
Article number	EU	2 607 225 471	2 607 225 471		
	UK	2 607 225 473	2 607 225 473		
	AU	2 607 225 475	2 607 225 475		
Charging current	mA	1500	1500		
Allowable charging temperature range	°C	0-45	0-45		
Weight according to EPTA-Procedure 01/2003	kg	0.4	0.4		
Protection class		□ / II	□ / II		
Please observe the article number on the type no	to of vour	garden product. The trade no	man of the individual garden		

Please observe the article number on the type plate of your garden product. The trade names of the individual garden products may vary.

Cordless Trimmer		ART 23 LI	ART 26 LI	
Battery Charger		AL 2204 CV	AL 2204 CV	
Article number	EU UK AU	2 607 225 273 2 607 225 275 2 607 225 277	2 607 225 273 2 607 225 275 2 607 225 277	
Charging current	mA	430	430	
Allowable charging temperature range	°C	0-45	0-45	
Weight according to EPTA-Procedure 01/2003	kg	0.7	0.7	
Protection class		□ / II	□ / II	

Please observe the article number on the type plate of your garden product. The trade names of the individual garden products may vary.

## **Noise/Vibration Information**

Measured sound values determined according to 2000/14/EC (1.60 m height, 1 m distance away).

Typically the A-weighted noise levels of the product are: Sound pressure level 80 dB(A); sound power level 88 dB(A). Uncertainty K = 5 dB.

Vibration total values (triax vector sum) determined according to EN 60335: Vibration emission value  $a_h = 4 \text{ m/s}^2$ , Uncertainty K = 2.5 m/s<sup>2</sup>.

## Declaration of Conformity (

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardization documents: EN 60335 (battery powered product) and EN 60335 (battery charger) according to the provisions of the directives 2006/95/EC, 2004/108/EC, 2006/42/EC, 2000/14/EC.

2000/14/EC: Guaranteed sound power level 94 dB(A). Conformity assessment procedure according to Annex VI.

Equipment category: 33

Notified body: SRL, Sudbury England, Nr. 1088

Technical file at:

Bosch Lawn and Garden Ltd., PT-LG/EAE, Stowmarket, Suffolk IP14 1EY, England

**C€** 07

Dr. Egbert Schneider Senior Vice President Engineering Dr. Eckerhard Strötgen Head of Product Certification

i.V. Moyen

Robert Bosch GmbH, Power Tools Division D-70745 Leinfelden-Echterdingen 22.10.2010

## **Assembly**

## For Your Safety

- ► Warning: Switch off and remove battery from machine before adjusting or cleaning.
- The blade continues to rotate for a few seconds after the cordless trimmer is switched off.
- ► Caution do not touch the rotating blade.

## **Battery Charging**

▶ Observe the mains voltage! The voltage of the power supply must correspond with the data given on the nameplate of the battery charger. Battery chargers marked with 230 V can also be operated with 220 V.

Use only the charging unit supplied. Only this charging unit is matched to the lithium-ion battery used in the product.

The battery is equipped with temperature monitoring that allows charging only in the temperature range between 0 °C and 45 °C. In this manner, a high battery service life is achieved.

**Note:** The battery is supplied partially charged. To ensure full capacity of the battery, completely charge the battery in the battery charger before using your power tool for the first time.

The lithium ion battery can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery.

## Removing the Battery (see figure A)

Press the battery unlocking button and pull out the battery **15** toward the rear.

#### Charging Procedure (see figure A)

The charging procedure starts as soon as the mains plug is plugged into the socket and the battery is then inserted into the battery charger **14**.

Firstly, place the battery **15** as shown in the figure onto the front of the battery charger (**0**) and then press the battery **15** down at the rear (**2**). To remove the battery, proceed in reverse order.

Due to the intelligent charging method, the charging condition of the battery is automatically detected and the battery is charged with the optimum charging current, depending on battery temperature and voltage.

This gives longer life to the battery and always leaves it fully charged when kept in the charger for storage.

**Note:** The charging procedure is only possible when the battery temperature is within the allowable charging temperature range, see section "Technical Data".

### Flashing Battery Charge Indicator 13



The charging procedure is signalled by a **flashing** battery charge indicator **13**.

## Continuous Lighting of the Battery Charge Indicator 13



Continuous lighting of the battery charge indicator 13 indicates that the battery is fully charged or that the tem-

perature of the battery is not within the allowable charging temperature range, and cannot be charged for this reason. The battery is charged as soon as the allowable charging temperature range is reached.

When the battery is not inserted, **continuous lighting** of the battery charge indicator **13** indicates that the mains plug is inserted in the socket and that the battery charger is ready for operation.

#### **Charging Advice**

With continuous or several repetitive charging cycles without interruption, the charger can warm up. This is not meaningful and does not indicate a technical defect of the battery charger.

A significantly reduced working period after charging indicates that the battery is used and must be replaced.

The "Electronic Cell Protection (ECP)" protects the lithium ion battery against deep discharging. When the battery is run down or discharged, the garden product is shut off by means of a protective circuit: The blade no longer moves.

**⚠** WARNING

Do not continue to press the On/Off switch after the garden

product has been automatically switched off. The battery can be damaged.

## **Product Assembly**

- ► Do not insert the battery until the cordless trimmer is completely assembled.
- Ensure that the cordless trimmer is assembled in the following order:

#### Mounting the Blade Guard (see figure B)

Place the blade guard 11 on the trimmer head 9.

- Hook the blade guard onto the trimmer head and push it toward the rear.
- Press the blade guard downward until securely latched (click).

#### Mounting the Cutting Disc/Blade

Press the cutting disc **17** onto the drive shaft (click). (see figure C)

Position the blade **10** onto the pin **18**, push it down and pull it outward until it engages. (see figure D)

## Operation

#### **Starting**

- Remove stones, loose pieces of wood and other objects from the cutting area.
- ► The blade continues to rotate for a few seconds after the cordless trimmer is switched off. Allow the motor/blade to stop rotating before switching "on" again.
- ▶ Do not rapidly switch off and on.

#### Inserting the Battery

Insert the battery into the machine as shown. The battery must be felt to engage.

#### **Switching On**

Press the lock-off button **2** and hold while actuating the On/Off switch **1**.

Release the lock-off button 2 again.

#### **Switching Off**

Release the On/Off switch 1.

**Note:** There is a short delay in the motor starting after engaging the on/off switch **1**.

### **Adjustment**

#### Using the Adjustable Handle (see figure E)

The adjustable handle **5** can be set in various positions:

- To change the position, loosen the handle screw 4 and move the adjustable handle 5.
- Tighten the handle screw 4 securely to fix the adjustable handle 5 in the adjusted position.

#### Adjusting the Trimmer Length (see figure F)

- Turn the adjusting collar 6 by 90°.
- Pull the shaft out to increase the height, or push the shaft in to decrease the height. Retighten the adjusting collar 6.

## Adjusting the Trimmer-head Angle (see figure G)

To change the cutting angle, press the foot pedal **12** down and move the shaft **7** to the requested position.

Release the foot pedal 12.

#### Adjusting for Edging Mode (see figures H-I)

- H Adjusting the trimmer-head angle:
- Press the foot pedal 12 down.
- Move the shaft 7 to the lowest position. Release the foot pedal 12 again.
- Moving the trimmer head:
- Loosen the adjusting collar 6.
- Turn the shaft 7 by 90° to adjust the trimmer head 9 for trimming/edging as shown. Re-tighten the adjusting collar 6.

#### Working Advice



Protect the battery from heat, for example continuous exposure to sun radiation and fire.

Product will not function if temperature is below 0 °C or above 45 °C!

#### **Cutting Grass (see figure J)**

Move the cordless trimmer left and right, keeping it well away from the body.

The trimmer can efficiently cut grass up to a height of 15 cm. Cut higher grass in stages.

#### **Trimming Edges**

Guide the cordless trimmer along the edge of the lawn. Avoid contact with paved surfaces, stones or garden walls, as this will wear the blade rapidly.

For better control, use the plant protector **19** (accessory) as a guide. (see figure K)

## Cutting Around Trees and Bushes (see figure L)

 Carefully cut around trees and bushes so that they do not come into contact with the blade. Plants can die if you damage the bark.

For better control, use the plant protector **19** (accessory) as a guide. (see figure K)

#### **Battery Duration**

The battery duration is dependent on the working conditions:



#### **Light conditions:**

up to 800 metres (ART 23 LI) up to 1000 metres (ART 26 LI)



#### Medium conditions:

up to 350 metres (ART 23 LI) up to 440 metres (ART 26 LI)

## **Tough conditions:**

up to 60 metres (ART 23 LI) up to 75 metres (ART 26 LI)

## Changing the Blade (see figure D)

Warning: Before any work on the machine itself, remove the battery from the machine.

To remove the worn blade **10**, push it inward until it snaps off of the pin **18**.

Clean the pin **18** of any residual plastic/debris with a sharp knife.

To mount a new blade **10**, place the blade **10** onto the pin **18**, push it down and pull it outward until it engages.

**Note:** Only use Bosch replacement blades. They have been developed specially for improved cutting and feed performance. The use of other blades will lead to a deterioration in performance.

## Troubleshooting

The following chart lists problem symptoms, possible causes and corrective action, if your garden product does not operate properly. If these do not identify and correct the problem, contact your service agent.

#### ▶ Warning: Switch off and remove the battery prior to any troubleshooting.

Problem	Possible Cause	Corrective Action
Blade guard can not be mounted over cutting disc	Incorrect assembly	Remove cutting disc and mount blade guard again; also see "As- sembly"
Trimmer fails to operate	Battery discharged	Recharge battery; also see "Battery Charging"
	Battery too hot/cold	Allow to cool/warm
Trimmer runs intermittently	Internal wiring of garden prod- uct damaged	Contact Service Agent
	On/Off switch defective	Contact Service Agent
Excessive vibrations/noise	Garden product defective	Contact Service Agent
	Blade broken	Replace the blade

Problem	Possible Cause	Corrective Action
Cutting time per battery charge too low	Battery has not been used for long period or only for short terms	Fully charge battery; also see "Battery Charging"
	Grass too high	Cut in stages
	Battery dead or defective	Replace the battery
Blade will not move	Battery discharged	Recharge battery; also see "Battery Charging"
	Garden product defective	Contact Service Agent
Garden product does not cut	Blade broken	Replace the blade
	Battery not fully charged	Recharge battery; also see "Battery Charging"
	Grass entangled around cutting disc	Remove grass
Continuous lighting of the battery charge indicator <b>13</b>	Battery not (properly) inserted	Properly insert battery into battery charger
No charging procedure possible	Battery contacts contaminated	Clean the battery contacts (e.g. by inserting and removing the battery several times) or re- place the battery
	Battery defective	Replace the battery
Battery charge indicator <b>13</b> does not light up	Mains plug of battery charger not plugged in (properly)	Insert mains plug (fully) into the socket outlet
	Socket outlet, mains cable or battery charger defective	Check the mains voltage; have the battery charger checked by an authorised after-sales service agent for Bosch power tools

## **Maintenance and Service**

### **Maintenance and Cleaning**

Warning: Before any work on the machine itself, remove the battery from the machine.

**Note:** To ensure long and reliable service, carry out the following maintenance regularly.

Regularly check for obvious defects such as loose fixings, and worn or damaged components.

Check that covers and guards are undamaged and correctly fitted. Carry out necessary maintenance or repairs before using.

If the garden product should happen to fail despite the care taken in manufacture and testing, repair should be carried out by an authorised customer service agent for Bosch garden products

In all correspondence and spare parts orders, please always include the 10-digit article number given on the type plate of the garden product.

## After Use/Storage

# Warning: Switch the machine off and remove the battery. Ensure battery is removed before storage.

Clean the exterior of the machine thoroughly using a soft brush and cloth. Do not use water, solvents or polishes. Remove all grass and debris, especially from the ventilation slots 8.

Turn the machine on its side and clean the cutting guard **11** inside. If grass cuttings are compacted, remove with a wooden or plastic implement.

Check if guards and protective devices are undamaged and properly mounted. Before using, carry out possibly necessary maintenance and repairs.

The battery should be stored between 0  $^{\circ}$ C and 45  $^{\circ}$ C.

## After-sales Service and Customer Assistance

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. Exploded views and information on spare parts can also be found under:

#### www.bosch-garden.com

Our customer service representatives can answer your questions concerning possible applications and adjustment of products and accessories.

#### **Great Britain**

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E-Mail: rbsa-hq.pts@za.bosch.com

#### **Transport**

Dispatch batteries only when the housing is undamaged. Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.

When dispatching lithium-ion batteries, compulsory labeling may be required. Please observe the respective national regulations.

### Disposal

The garden product, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of garden products, battery chargers and batteries/rechargeable batteries into household waste!

## Only for EC countries:



According to the European law 2002/96/EC, electrical and electronic equipments that are no longer usable, and according to the European law 2006/66/EC, defective or used battery

packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

Batteries no longer suitable for use can be directly returned at:

#### **Great Britain**

**UB 9 5HJ** 

Robert Bosch Ltd. (B.S.C.) P.O. Box 98 Broadwater Park North Orbital Road Denham Uxbridge

Tel. Service: +44 (0844) 736 0109

Fax: +44 (0844) 736 0146

E-Mail: boschservicecentre@bosch.com

#### Battery packs/batteries:



#### Li-ion:

Please observe the instructions in section "Transport", page 17.

Subject to change without notice.